

## **Amendments to the Claims**

**This listing of claims will replace all prior versions, and listings, of claims in the application.**

### **Listing of Claims**

#### **IN THE CLAIMS**

**Claim 1 (currently amended).** A method for treating cognitive dysfunction of a patient associated with low LDL-cholesterol values in serum, other than one being treated for Alzheimer's disease with galanthamine, lycoramine or an analog of galanthamine or lycoramine, said method comprising determining the LDL-cholesterol value for such patient and administering an effective amount of a nicotinic allosteric potentiator being galanthamine or lycoramine or an analog of galanthamine or lycoramine is one wherein at least one of the methoxy, hydroxy or methyl groups of galanthamine or lycoramine is replaced as follows:

the methoxy group by another alkoxy group of from one to six carbon atoms, a hydroxy group, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group or a trialkylsilyloxy group;

the hydroxy group by an alkoxy group of from one to six carbon atoms, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group;

the N-methyl group by hydrogen, alkyl, benzyl, cyclopropylmethyl group or a substituted or unsubstituted benzyloxy group[.],

to a patient other than one being treated for Alzheimer's Disease who has been determined to have a serum-LDL-cholesterol level of below 109 mg/dl.

**Claim 2 (canceled).**

**Claim 3 (Previously Presented).** A method as claimed in claim 1 wherein said low cholesterol values are the result of treatment with HMG-CoA reductase inhibitors.

**Claim 4 (Previously Presented).** A method as claimed in claim 1 wherein said modulation of nicotinic receptors is effected by administering an effective amount of a galanthamine or lycoramine analog to a patient in need of such modulation.

**Claim 5 (Withdrawn).** A method as claimed in claim 2 wherein said modulation of nicotinic receptors is effected by administering an effective amount of a galanthamine or lycoramine analog to a patient in need of such modulation.

**Claim 6 (Withdrawn).** A method as claimed in claim 3 wherein said modulation of nicotinic receptors is effected by administering an effective amount of a galanthamine or lycoramine analog to a patient in need of such modulation.

**Claim 7 (Withdrawn).** A method as claimed in claim 4 wherein said analog of galanthamine or lycoramine is one wherein at least one of the methoxy, hydroxy or methyl groups of galanthamine or lycoramine is replaced as follows:

the methoxy group by another alkoxy group of from one to six carbon atoms, a hydroxy group, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group or a trialkylsilyloxy group;

the hydroxy group by an alkoxy group of from one to six carbon atoms, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group;

the N-methyl group by hydrogen, alkyl, benzyl, cyclopropylmethyl group or a substituted or unsubstituted benzyloxy group.

**Claim 8 (Withdrawn).** A method as claimed in claim 5 wherein said analog of galanthamine or lycoramine is one wherein at least one of the methoxy, hydroxy or methyl groups of galanthamine or lycoramine is replaced as follows:

the methoxy group by another alkoxy group of from one to six carbon atoms, a hydroxy group, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group or a trialkylsilyloxy group;

the hydroxy group by an alkoxy group of from one to six carbon atoms, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group;

the N-methyl group by hydrogen, alkyl, benzyl, cyclopropylmethyl group or a substituted or unsubstituted benzyloxy group.

**Claim 9 (Withdrawn).** A method as claimed in claim 6 wherein said analog of galanthamine or lycoramine is one wherein at least one of the methoxy, hydroxy or methyl groups of galanthamine or lycoramine is replaced as follows:

the methoxy group by another alkoxy group of from one to six carbon atoms, a hydroxy group, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group or a trialkylsilyloxy group;

the hydroxy group by an alkoxy group of from one to six carbon atoms, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group;

the N-methyl group by hydrogen, alkyl, benzyl, cyclopropylmethyl group or a substituted or unsubstituted benzyloxy group.

**Claim 10 (Withdrawn).** A method as claimed in claim 4 wherein any alkanoyloxy, carbamate and carbonate group present contains up to ten carbon atoms.

**Claim 11 (Withdrawn).** A method as claimed in claim 5 wherein any alkanoyloxy, carbamate and carbonate group present contains up to ten carbon atoms.

**Claim 12 (Withdrawn).** A method as claimed in claim 6 wherein any alkanoyloxy, carbamate and carbonate group present contains up to ten carbon atoms.

**Claim 13 (Withdrawn).** A method as claimed in claim 4 wherein any of said alkanoyloxy, carbamate or carbonate group comprises an alkyl or alkoxy group of from 1 to 6 carbon atoms optionally substituted by one or more halo groups.

**Claim 14 (Withdrawn).** A method as claimed in claim 5 wherein any of said alkanoyloxy, carbamate or carbonate group comprises an alkyl or alkoxy group of from 1 to 6 carbon atoms optionally substituted by one or more halo groups.

**Claim 15 (Withdrawn).** A method as claimed in claim 6 wherein any of said

**alkanoyloxy, carbamate or carbonate group comprises an alkyl or alkoxy group of from 1 to 6 carbon atoms optionally substituted by one or more halo groups.**

**Claim 16 (Withdrawn).** A method as claimed in claim 4 wherein said analog is a galanthamine analog.

**Claim 17 (Withdrawn).** A method as claimed in claim 5 wherein said analog is a galanthamine analog.

**Claim 18 (Withdrawn).** A method as claimed in claim 6 wherein said analog is a galanthamine analog.

**Claim 19 (Withdrawn).** A method as claimed in claim 4 wherein said analog is a lycoramine analog.

**Claim 20 (Withdrawn).** A method as claimed in claim 5 wherein said analog is a lycoramine analog.

**Claim 21 (Withdrawn).** A method as claimed in claim 6 wherein said analog is a lycoramine analog.

**Claim 22 (Withdrawn).** A method as claimed in claim 4 wherein said analog is an n-butyl carbamate.

**Claim 23 (Withdrawn).** A method as claimed in claim 5 wherein said analog is an n-butyl carbamate.

**Claim 24 (Withdrawn).** A method as claimed in claim 6 wherein said analog is an n-butyl carbamate.

**Claim 25 (Withdrawn).** A method as claimed in claim 4 wherein the methoxy group of galanthamine or lycoramine is replaced by a hydrogen, hydroxy or alkoxy group of

**from two to six carbon atoms or an acyloxy group or a mono or dialkyl carbamate or carbonate group wherein the alkyl groups contain from 1 to 8 carbon atoms.**

**Claim 26 (Withdrawn).** A method as claimed in claim 5 wherein the methoxy group of galanthamine or lycoramine is replaced by a hydrogen, hydroxy or alkoxy group of from two to six carbon atoms or an acyloxy group or a mono or dialkyl carbamate or carbonate group wherein the alkyl groups contain from 1 to 8 carbon atoms.

**Claim 27 (Withdrawn).** A method as claimed in claim 6 wherein the methoxy group of galanthamine or lycoramine is replaced by a hydrogen, hydroxy or alkoxy group of from two to six carbon atoms or an acyloxy group or a mono or dialkyl carbamate or carbonate group wherein the alkyl groups contain from 1 to 8 carbon atoms.

**Claim 28 (Withdrawn).** A method as claimed in claim 4 wherein the hydroxy group of galanthamine or lycoramine is replaced by an alkoxy group of from one to six carbon atoms, hydrogen, an acyloxy group, a carbonate group or a carbamate group which may be a mono or dialkyl or an aryl carbamate or carbonate wherein the alkyl groups contain from 1 to 8 carbon atoms.

**Claim 29 (Withdrawn).** A method as claimed in claim 5 wherein the hydroxy group of galanthamine or lycoramine is replaced by an alkoxy group of from one to six carbon atoms, hydrogen, an acyloxy group, a carbonate group or a carbamate group which may be a mono or dialkyl or an aryl carbamate or carbonate wherein the alkyl groups contain from 1 to 8 carbon atoms.

**Claim 30 (Withdrawn).** A method as claimed in claim 6 wherein the hydroxy group of galanthamine or lycoramine is replaced by an alkoxy group of from one to six carbon atoms, hydrogen, an acyloxy group, a carbonate group or a carbamate group which may be a mono or dialkyl or an aryl carbamate or carbonate wherein the alkyl groups contain from 1 to 8 carbon atoms.

**Claim 31 (Withdrawn).** A method as claimed in claim 4 wherein the compound employed is one wherein the hydroxyl group of galanthamine or lycoramine is replaced

by an alkanoyl group of 2 to 7 carbon atoms, a mono or dialkyl carbamate of 1 - 8 carbon atoms per alkyl group, a mono or diaryl carbamate, an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**Claim 32 (Withdrawn).** A method as claimed in claim 5 wherein the compound employed is one wherein the hydroxyl group of galanthamine or lycoramine is replaced by an alkanoyl group of 2 to 7 carbon atoms, a mono or dialkyl carbamate of 1 - 8 carbon atoms per alkyl group, a mono or diaryl carbamate, an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**Claim 33 (Withdrawn).** A method as claimed in claim 6 wherein the compound employed is one wherein the hydroxyl group of galanthamine or lycoramine is replaced by an alkanoyl group of 2 to 7 carbon atoms, a mono or dialkyl carbamate of 1 - 8 carbon atoms per alkyl group, a mono or diaryl carbamate, an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**Claim 34 (Withdrawn).** A method as claimed in claim 4 wherein the compound employed is one wherein the methoxy group of galanthamine or lycoramine is replaced by an alkoxy group of two to six carbon atoms or a carbonate of from one to six carbon atoms an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**Claim 35 (Withdrawn).** A method as claimed in claim 5 wherein the compound employed is one wherein the methoxy group of galanthamine or lycoramine is replaced by an alkoxy group of two to six carbon atoms or a carbonate of from one to six carbon atoms an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**Claim 36 (Withdrawn).** A method as claimed in claim 6 wherein the compound employed is one wherein the methoxy group of galanthamine or lycoramine is replaced by an alkoxy group of two to six carbon atoms or a carbonate of from one to six carbon atoms an alkyl carbonate of one to six carbon atoms in its alkyl group or an aryl carbonate.

**carbonate.**

**Claim 37 (canceled).**

**Claim 38 (Previously presented).** A method as claimed in claim 1 wherein said modulation of nicotinic receptors is effected by administering an effective amount of galanthamine.

**Claim 39 (canceled) .**

**Claim 40 (canceled)**

**Claim 41 (new).** A method for treating cognitive dysfunction of a patient associated with low LDL-cholesterol values in serum, with galanthamine, lycoramine or an analog of galanthamine or lycoramine , said method comprising determining the LDL-cholesterol value for such patient and administering an effective amount of a nicotinic allosteric potentiator being galanthamine or lycoramine or an analog of galanthamine or lycoramine is one wherein at least one of the methoxy, hydroxy or methyl groups of galanthamine or lycoramine is replaced as follows:  
the methoxy group by another alkoxy group of from one to six carbon atoms, a hydroxy group, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group or a trialkylsilyloxy group;  
the hydroxy group by an alkoxy group of from one to six carbon atoms, hydrogen, an alkanoyloxy group, a benzyloxy or substituted benzyloxy group, a carbonate group or a carbamate group;  
the N-methyl group by hydrogen, alkyl, benzyl, cyclopropylmethyl group or a substituted or unsubstituted benzyloxy group[.],  
to a patient who has been determined to have a serum-LDL-cholesterol level of below 109 mg/dl.